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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,188	07/08/2004	Kazuhiko Honda	A36289 PCT USA 0742240139	3471
21003	7590	09/26/2005	EXAMINER	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			KOEHLER, ROBERT R	
			ART UNIT	PAPER NUMBER
			1775	
DATE MAILED: 09/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/501,188

Applicant(s)

HONDA ET AL.

Examiner

Robert R. Koehler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2004 (Prel. Amdt.).  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 7-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 07082004.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Evaluations of the level of ordinary skill in the art requires consideration of such factors as various prior art approaches, types of problems encountered in the art, rapidity with which innovations are made, sophistication of technology involved, educational background of those actively working in the field, commercial success, and failure of others.

The "person having ordinary skill" in this art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The evidence of record including the references and/or admissions are considered to reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,465,114 B1 (Honda, et al.) in view of Japan Patent Application No. 7-316763 (JP '763).

Honda, et al. teaches a zinc-coated steel sheet which may be painted. The zinc coating comprises a zinc-base alloy that includes magnesium, aluminum, and silicon having alloy

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elemental ranges which overlap applicants' claimed zinc-base alloy elemental range limits. See the Abstract. Honda, et al. teaches the presence of various metallurgical phases such as Al and  $MgZn_2$  in a matrix of an Al/Zn/ $MgZn_2$  ternary eutectic structure. Honda, et al. points out that binary eutectic structures in the zinc coating are also possible. Also, Honda, et al. mentions the usage of minor amounts of additional alloying elements such as calcium, beryllium, and titanium in the zinc-alloy coating layer. The zinc-base coating can be applied to a wide variety of steel substrates such as Al-killed steel or very low carbon steel. See line 34 in column 6 to line 64 in column 11. Honda, et al. does not teach the usage of any steel substrate having particular surface roughness (Ra) values or a particular filtered waviness curve ( $W_{CA}$ ).

Japan '763 does teach the usage of steel sheet having average surface roughness Ra values and filtered waviness curve  $W_{CA}$  values that also lie within applicants' claimed Ra range and the claimed  $W_{CA}$  range. See the English-language Abstract. The Examiner notes that the particular steel sheet taught by Japan '763 can be used in a hot-dip method to form a zinc-aluminum alloy coating on the steel sheet.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the teaching by Honda, et al. concerning the suitability of using various steels for producing galvanized steel stock material as suggested by the steel having surface roughness properties taught by Japan '763 because the particular steel taught by Japan '763 can also be used to manufacture a suitable galvanized steel stock material. A person skilled in the art of galvanized steel metallurgy would have been motivated to rely on Japan '763 because an improved steel surface roughness property will produce a better galvanized coating on the steel substrate. Note that the Abstract of Japan '763 mentions a remarkable improvement of "the image sharpness of the precoated steel sheet" when the steel surface roughness is controlled prior to galvanizing.


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***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Robert Koehler whose telephone number is **(571) 272-1536**. The Examiner can normally be reached on Tuesday to Friday from 9:30 AM to 7:00 PM. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on **(571) 272-1535**. The official Fax No. is **(571) 273-8300**, and the After-Final Fax No. is **(571) 273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866-217-9197** (toll-free).



**ROBERT R. KOEHLER  
PRIMARY EXAMINER**

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September 17, 2005**